KBR Risk Management

NC State ERM Roundtable
April 24, 2009
Overview of Presentation

• Getting Started
  – Summary of KBR
  – Situation at Separation
  – Why is ERM Important?
  – What is ERM?

• KBR’s Rollout of ERM
  – Tone at the Top & Culture
  – Methodology
  – Packaging

• ERM Today and Tomorrow
  – Lessons from 2008
  – Other Constructs
  – Future of ERM
KBR’s Balance Sheet remains strong; As of December 31, 2008, cash and equivalents totaled $1.1 billion and no debt; $420 million available under current Revolving Credit Facility.
“Go To” Contractor

Skikda LNG; Tangguh LNG;
Yemen LNG; EBIC Ammonia Project

Yanbu Export Refinery;
Pearl GTL; Ras Tanura;
Multiple LNG Projects;

ROSE™; SUPERFLEX™;
SCORE™; KAAP™; TRIG™

Ras Tanura; Pearl GTL;
Kashagan

North Rankin 2;
Pluto Offshore Platform;
Pazflor FPSO Topsides;
Trans Caspian Oil & Gas Study

FEED

LogCAP III & IV;
CONCAP; CONLOG;
AFCAP; CENTCOM;

PMC

Design / Consulting

Technology

EPC / EPCm
A History of Successful Innovation

1942
First fluid catalytic cracking facility

DoD – WWII
Completed 359 destroyer escort and other vessels

1947
World’s first offshore platform
(Kerr McGee - Gulf of Mexico)

1964
First North Sea platform
(BP West Sole)

2004
World’s largest LNG plant in operation
(SEGAS)

2004
First full scale CO₂ sequestration project
(In Salah)

NASA
Architect engineer for Johnson Space Center

2005
World’s largest ammonia plant at groundbreaking
(BFPL Australia)
Getting Started
Situation at Separation

- 100 year old start-up
- Legacy issues
- Culture Confusion
- New NYSE listing: KBR
- New Board of Directors
- New Management Team
KBR’s Rollout of ERM

Tone at the Top & Culture

• Tone at the Top

• KBR Mission, Vision and Values

  **Motto:** We Deliver
  **Mission:**
  – We safely deliver any project, any time, in any environment for the benefit of our customers, shareholders, employees and the communities we serve
  **Vision:**
  – To be the world's premier contractor delivering projects and services to a global marketplace
  **Values:**
  – Uncompromising commitment to Health, Safety and Environment
  – An open relationship with our employees based on mutual trust, respect and success
  – Transparency, Accountability and Discipline in our business
  – Best-in-Class Risk Awareness
  – Integrity in all we do
  – Financial Responsibility to our stakeholders
Getting Started

Why is ERM Important to KBR?

• NYSE Requirement
  – Audit Committee required to discuss with internal and external auditors how the listed company handles risks and the steps management has taken to monitor and control such risks

• SEC
  – Urging public companies to use information gleaned from ERM to enhance disclosure in MD&A

• Increasing Board Pressure to Discuss Risk
  – McKinsey survey of 1,000 board members, 76% would like to spend more time on risk

• Rating Agencies
  – Proposed use of in-depth ERM criteria for ratings of all companies
Getting Started

What is ERM?

COSO ERM Framework
• Aligning Risk Tolerance with Strategy

KBR, 2007
• Best-in-Class Risk Awareness

KBR, 2009
• Best-in-Class Risk Awareness Married with Expert and Timely Perspectives about Emerging and Strategic Issues

Source: COSO ERM Framework
The next step in this risk assessment exercise is to prioritize the risks by rating them based on impact and likelihood.

**Example:**

<table>
<thead>
<tr>
<th>Risk: Effect of an acquisition, merger or divestiture</th>
<th>Impact</th>
<th>Likelihood</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Explanation and Rationale of risk example:

1. Rate the impact of each risk, without regard to the likelihood of occurrence. The rating should be based on the cumulative effect on KBR’s profit or cash flow over the next three years if a significant adverse event or prolonged situation were to occur within the particular risk exposure. Furthermore, rate the impact of each risk as it is currently being controlled today.

   Please circle only one response for each risk from the following scale:

   **Impact:**
   1 – Significant, between $1 - $15 MM
   2 – Material, between $15 - $50 MM
   3 – Severe, between $50 - $100 MM
   4 – Extreme, between $100 - $300 MM
   5 – Catastrophic, more than $300 MM

2. After ranking the risk for impact, rank the likelihood that the risk will occur based on KBR’s history and frequency of such occurrences.

   **Likelihood:**
   1 – Highly Improbable, 0.1% probability of occurrence within three years
   2 – Improbable, 1% probability of occurrence within three years
   3 – Unlikely, 5% probability of occurrence within three years
   4 – Possible, 25% probability of occurrence within three years
   5 – Probable, 80% probability of occurrence within three years

Space is provided at the end of each survey to clarify your responses, if necessary.
KBR’s Rollout of ERM
Methodology - Heat Map of Individual Responses

Heat Map

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; $300 MM</td>
<td>80%</td>
</tr>
<tr>
<td>$100 - $300 MM</td>
<td>25%</td>
</tr>
<tr>
<td>$50 - $100 MM</td>
<td>5%</td>
</tr>
<tr>
<td>$15 - $50 MM</td>
<td>1%</td>
</tr>
<tr>
<td>&lt; $15 MM</td>
<td>&lt;0.1%</td>
</tr>
</tbody>
</table>
## KBR’s Rollout of ERM

### Methodology – Assessment and Alignment

<table>
<thead>
<tr>
<th>Rank</th>
<th>Risk Description</th>
<th>Exec Mngt</th>
<th>Sr. Mngt</th>
<th>BU Mngt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Risk 1</td>
<td>Extreme</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>2</td>
<td>Risk 2</td>
<td>Extreme</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>3</td>
<td>Risk 3</td>
<td>Extreme</td>
<td>High</td>
<td>Moderate</td>
</tr>
<tr>
<td>4</td>
<td>Risk 4</td>
<td>Extreme</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>5</td>
<td>Risk 5</td>
<td>High</td>
<td>Extreme</td>
<td>High</td>
</tr>
<tr>
<td>6</td>
<td>Risk 6</td>
<td>Not Surveyed</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>7</td>
<td>Risk 7</td>
<td>High</td>
<td>High</td>
<td>Extreme</td>
</tr>
<tr>
<td>8</td>
<td>Risk 8</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>9</td>
<td>Risk 9</td>
<td>High</td>
<td>High</td>
<td>Moderate</td>
</tr>
<tr>
<td>10</td>
<td>Risk 10</td>
<td>Moderate</td>
<td>High</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

### Identified Risk

#### Heat Map

- **Likelihood**
  - 80%
  - 25%
  - 5%
  - 1%
  - <0.1%

- **Impact**
  - $1 - $15 MM
  - $15 - $50 MM
  - $50 - $100 MM
  - $100 - $300 MM
  - > $300 MM

- **Rank**
  - 1
  - 2
  - 3

- **Likelihood Color Coding**
  - 80%: Orange
  - 25%: Yellow
  - 5%: Green
  - 1%: Dark Green
  - <0.1%: White

- **Impact Color Coding**
  - $1 - $15 MM: Red
  - $15 - $50 MM: Yellow
  - $50 - $100 MM: Orange
  - $100 - $300 MM: Green
  - > $300 MM: White

- **Rank Color Coding**
  - 1: Red
  - 2: Yellow
  - 3: Orange

### Key Points
- Risk Assessment
- Focus on Alignment
KBR’s Rollout of ERM Methodology - 2007 & 2008 ERM Activities

• Strategize
  – ERM strategy established in collaboration with Internal Audit and Financial Controls in 2007
  – Methodology for scoring Impact and Likelihood developed in 2007

• Identify
  – Survey Questionnaire completed 2007

• Assess
  – Executive Risk Assessment, 2007
  – Senior Management Risk Assessment, 2007
  – Audit Committee ERM Overview, 2007
  – All Business Unit Risk Assessments completed 2008
  – Audit Committee ERM Overview, 2008

• ERM is about packaging and promoting all corporate risk management programs into one risk narrative.
Governance, Compliance, and QHSE
Basic blocking and tackling. We ensure that employees are safe, procedures are followed, and compliance with laws. We protect the environment and we provide jobs to local communities.
KBR’s Rollout of ERM
Packaging – Governance, Compliance and QHSE

- Audit Committee & Internal Audit Dept.
- Code of Business Conduct
- Internal Control Committee
- Disclosure Committee
- CEO/CFO Certification Meeting
- Policies & Procedures
- Delegation of Authority

- Bureau of Labor Statistics Recordable Incident Rates
  - 2004 KBR: 1.10 vs. Industry: 5.90
  - 2005 KBR: 1.11 vs. Industry: 5.60
  - 2006 KBR: 0.83 vs. Industry: 5.30
  - 2007 KBR: 0.53 vs. Industry: 4.90

- Lloyd’s Register Quality Assurance Global Integrated Certification awarded to Energy & Chemicals
  - ISO 9001:2000 for Quality
  - ISO 14001:2004 for Environment
  - OSHAS 18001:1999 for Occupational Health and Safety
Project Risk Management
Takes a deep dive into each project with its Risk Breakdown Structure, Risk Register, and Risk Management System.
KBR’s Rollout of ERM
Packaging – Project Risk Management

- Briefing by PM and Review of Project History / Requirements
- Identification of Threats/Opportunities
- ID of Risks In Task Flow Network
- Interview Risk Owners
- Risk Register
- Classification of Critical and Important Risks
- Detail Cause/Effect Fishbone Diagram
- Risk Impact Task Schedule
- Risk Response Plans
- Schedule / Cost Model, Validate & Range
- Risk Assessment Deliverables
- Comparative Benchmarks
- Report Profile
- Ongoing Monitoring

Project Risk Management
Business Development Oversight
Looks across all projects to facilitate greater risk awareness, provide portfolio view of risk and return, and ensure smooth handover from sales to operations.
KBR’s Rollout of ERM
Packaging - Business Development Oversight

• KBR’s project decisions are based on a Cover Analysis that provides KBR Executive Management with an objective and transparent assessment of a transaction’s cost exposure associated with operations risk, liabilities and funding.

- Commercial Risk
  - Joint Ventures
  - Commercial Agents
  - External (Geopolitical, environmental)

- Execution Risk
  - Resources (HOS, HVEC’s etc)
  - Project Execution (Vendors, Subs etc)
  - Project Schedule & Cost

- Financial Risk
  - Bonds, Guarantees
  - Credit (Client, Partner, Subcontractor)
  - Currency, Taxes

- Contractual Risk
  - Rely Upon & Acceptance of Work
  - Liabilities & Indemnities
  - Performance & Warranties

Cost
+ Escalation
+ Risk Premium
+ Job Margin
= Price

Business Development Oversight
Enterprise Risk Management
Looks forward with a multi–year view to consider risks that will affect KBR as a whole. ERM will probe the periphery in an effort to detect weak signals that might provide early indicators of impending threats or possible opportunities.
KBR’s Rollout of ERM

Packaging – Enterprise Risk Management

1. Governance, Compliance and QHSE
2. Project Risk Management
3. Business Development Oversight
4. Enterprise Risk Management
“The problem was not a failure to appreciate complexity, but rather the opposite. It was a lack of simplicity and critical perspective, which prevented the right questions from being asked while there was still time.”

— Marcel Rohner, former CEO of UBS commenting on how the bank had missed the bigger picture by relying too much on its risk management process (FT, February 13, 2009)
ERM Today and Tomorrow
Lessons from 2008

**SIMPLICITY**
- Process
  - Familiar tools
  - Put it on paper, not a computer screen
    - Allow for contemplation
- Organizational
  - Don’t use a lot of resources
- Presentations
  - Design to promote dialogue
    - Less is more
    - What is the culture?

**PERSPECTIVE**
- ERM is about Socialization; not metrics
  - KBR is an engineering firm
  - Get managers out of their daily routine
- Make it interesting
  - Trends
  - Emerging Risks
- Qualitative, not:
  - Business Performance Management!
  - SarbOx!
- Probe for Emerging Risks
  - Most of the relevant information is already known within your organization
ERM Today and Tomorrow
Lessons from 2008

TIME

• Get the Risk Issue on the Table
  – Don’t get hung up on quantifying exposure (▼, ▲)
  – Move to qualitative assessment

• Create a pipeline to surface immediate concerns
  – Establish vetting process for immediate concerns
  – Agility is important

• Match the time horizon and orientation of the audience
• Parenting
  – Would a dashboard be effective in managing a teenager?
  – Risk issues surface through probing for information.
ERM Today and Tomorrow
Other Constructs

• Jazz
  – There are no wrong notes! This is jazz.
  – Harvard Business School Case about Creation and Innovation
    • *Kind of Blue* by Miles Davis, 1959
      • “Simplicity was essential to the success of *Kind of Blue.*”

• “Davis was known to have a preference for first takes…because they have magical quality that only exists when musicians are approaching something without an overly detailed plan.”

• “On a second take, musicians will try to improve their own performance, and … lose some of their ability to listen to everyone else.”

• “As a manager of musicians, Davis sometimes provoked.”

• Did the financial crisis damage risk management’s credibility or help companies learn how to implement risk management more wisely?

• Should the approach be mainly Quantitative or Qualitative?

• Is it more about Process or Culture?

• What is the End Game?

• Fundamental question remains, “What is ERM?”